

West Nile Virus Infection

(West Nile Virus Encephalitis, West Nile Fever)

Disease Fact Sheet Series

What is a West Nile virus infection?

It is an infection caused by West Nile virus, which is spread to people by the bite of a mosquito infected with the virus. Viruses that are spread to people by mosquitoes are called arboviruses. In temperate climates, West Nile virus infections generally occur during warm weather months when mosquitoes are active.

Is West Nile fever a new disease?

No. This virus was first identified in 1937 in Uganda, Africa. Prior to 1999, the virus had only been identified in Africa, Europe, the Middle East, and Asia. West Nile virus was first detected in the United States in 1999, when 62 cases and seven deaths from West Nile virus were reported in the New York City area. West Nile virus has spread across the U.S. and into Canada and Latin America since that time. The virus was found in Wisconsin for the first time in 2001 in infected wild birds. The first human infections of West Nile virus in Wisconsin were documented in 2002.

How is West Nile virus spread?

This virus is spread primarily through mosquitoes. Mosquitoes get infected with West Nile virus by feeding on infected birds. Once infected with the virus, a mosquito will transmit the virus to other animals or birds when they take another blood meal. In 2002, there were rare cases of West Nile virus infections that were transmitted to people by blood transfusions or organ transplants from donors unknowingly infected with West Nile virus.

Who gets West Nile virus?

Anyone can get infected with West Nile virus. People over 50 years of age are at an increased risk of severe disease from the virus.

What are the symptoms of a West Nile virus infection?

Most people infected with West Nile virus do not become ill. Approximately 20% of people may experience a mild illness that can present with fever, headache, eye pain, muscle aches, joint pain, a rash on the trunk, swollen lymph nodes, or nausea and vomiting.

Less than 1% of people infected with West Nile virus will become severely ill. Symptoms of severe illness include extreme muscle weakness, inflammation of the brain (encephalitis), paralysis, and coma. In rare cases the infection may be fatal, particularly in the elderly and people with other medical conditions.

How soon after being bitten by a West Nile virus infected mosquito do symptoms occur?

Symptoms usually occur 3 to 15 days after a West Nile virus infected mosquito bites a person.

Does past infection with this virus make a person immune?

Yes. Prior infection with West Nile virus can provide prolonged to lifelong immunity to the virus.

What is the treatment for West Nile virus infection?

There is no specific treatment for West Nile virus infection. A physician may provide treatment to relieve the symptoms of the illness. In severe cases hospitalization may be required.

What can be done to prevent an infection with West Nile virus?

Preventing mosquito bites will prevent West Nile virus infection. To decrease exposure to mosquitoes and the viruses they may carry; personal protective measures include:

- limiting the time spent outdoors at dawn and dusk during mosquito season (June to September) or other times mosquitoes are active,
- wearing shoes, socks, long sleeve shirts and long pants when outdoors,
- applying insect repellents containing DEET to exposed skin when outdoors,
- spraying clothing with insect repellents as mosquitoes may bite through thin clothing, and
- making sure your home window and door screens are in good repair to prevent mosquito entry.

Reducing mosquito populations will also reduce mosquito bites. In some communities, public funded surveillance and control programs reduce mosquito populations by eliminating mosquito breeding habitat, mosquito larvae or adults.

You can also take action to eliminate or reduce mosquito breeding sites and sources of standing water on your own property:

- Dispose of tin cans, plastic containers, ceramic pots or similar water-holding containers.
- Remove all discarded tires.
- Drill holes in the bottoms of recycling containers that are kept outdoors.
- Make sure roof gutters drain properly and clean clogged gutters.
- Change water in birdbaths regularly.
- Turn over wheelbarrows, wading pools, and boats when not in use.
- Clean vegetation and debris from the edge of ponds and aerate ornamental pools and water gardens and stock them with fish that eat mosquito larvae.
- Clean and chlorinate swimming pools, outdoor saunas and hot tubs.
- Drain water from pool covers.
- Use landscaping to eliminate standing water that collects on your property.